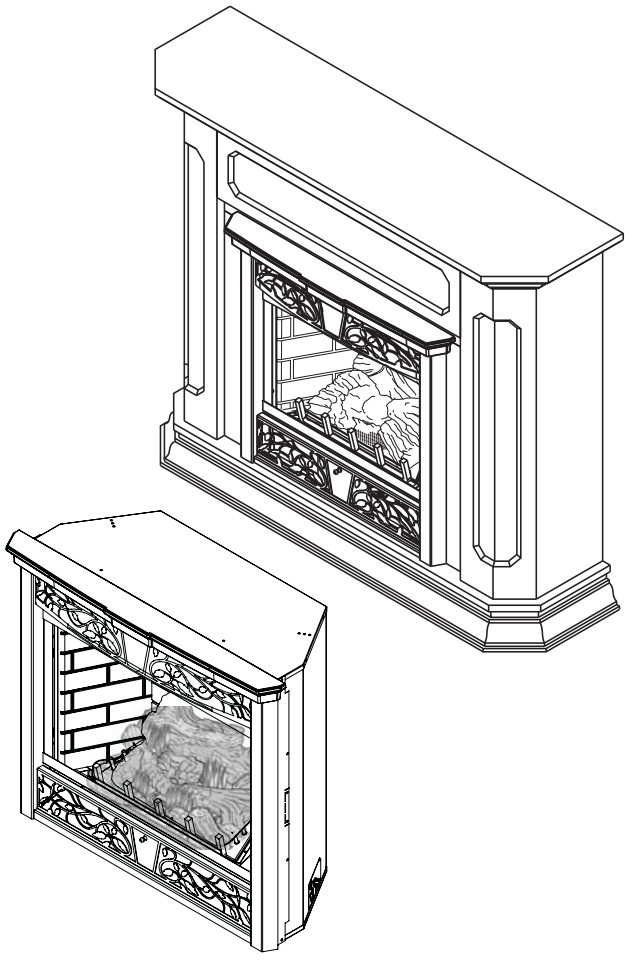
VERMONT CASTINGS | GROUP

CFX Series Vent Free Gas Fireplace Installation and Operating Instructions

Models: CFX24, CFX32 Millivolt Control, Natural Gas or Liquid Propane



⚠ WARNING: FIRE OR EXPLOSION HAZARD

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- **Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**
- **WHAT TO DO IF YOU SMELL GAS**
  - **Do not try to light any appliance.**
  - **Do not touch any electrical switch; do not use any phone in your building.**
  - **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
  - **If you cannot reach your gas supplier, call the fire department.**
- **Installation and service must be performed by a qualified installer, service agency or the gas supplier.**

This is an unvented gas-fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. *Refer to Page 7.*

MADE IN U.S.A.

DESIGN CERTIFIED

INSTALLER: Leave this manual with the appliance.

CONSUMER: Retain this manual for future reference.

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Thank you for purchasing a Vermont Castings Group product. We are proud to manufacture all of our gas and wood burning appliances in the USA. We hope that you enjoy your new fireplace and have many happy memories around it for years to come.

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IMPORTANT

Read these instructions carefully before installing or trying to operate this vent-free gas heater.

WARNING:

- Any change to this heater or its controls can be dangerous.
- Improper installation or use of the heater can cause serious injury or death from fire, burns, explosion or carbon monoxide poisoning.
- Do not allow fans to blow directly into the fireplace. Avoid any drafts that alter burner flame patterns.
- Do not use a blower insert, heat exchanger insert or other accessory, not approved for use with this heater where applicable.

1. Due to high temperatures, the appliance be located out of traffic and away from furniture and draperies.
2. Children and adults should be alerted to the hazard of high surface temperature and should stay away to avoid burns or clothing ignition.
3. Young children should be carefully supervised when they are in the same room with the appliance.
4. Do not place clothing or other flammable material on or near the appliance.
5. Any safety screen or guard removed for servicing an appliance, must be replaced prior to operating the heater.
6. Installation and repair should be done by a qualified service person.
7. To prevent malfunction and/or sooting, an unvented gas heater should be cleaned before use at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners and circulating air passageways be kept clean.
8. **CARBON MONOXIDE POISONING:** Early signs of carbon monoxide poisoning are similar to the flu with headaches, dizziness and/or nausea. If you have these signs, obtain fresh air immediately. Have the heater serviced as it may not be operating properly.
9. This unit complies with ANSI Z21.11.2 unvented heaters standard, latest edition.
10. Do not install the CFX Model in a bathroom or bedroom.
11. Correct installation of the ceramic fiber logs, proper location of the heater, and annual cleaning are necessary to avoid potential problems with sooting. Sooting, resulting from improper installation or operation, can settle on surfaces outside the fireplace. See log placement instructions for proper installation.
12. Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into fireplace. Do not place a blower inside burn area of firebox. Ceiling fans may create drafts that alter burner flame patterns. Sooting and improper burning will occur.
13. **CAUTION:** Candles, incense, oil lamps, etc. produce combustion by-products including soot. Vent-free appliances will not filter or clean soot produced by these types of products. In addition, the smoke and/or aromatics (scents) may be re-burnt in the vent-free appliance which can produce odors. It is recommended to minimize the use of candles, incense, etc. while the vent-free appliance is in operation.
14. An unvented gas-fired heater uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. See installation guidelines.
15. This heater shall not be installed in a room or space unless the required volume of indoor combustion air is provided by the method described in the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*, the *International Fuel Gas Code* or applicable local codes.
16. Keep room area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
17. Unvented gas heaters are a supplemental zone heater. They are not intended to be a primary heating appliance.
18. Unvented gas heaters emit moisture into the living area. In most homes of average construction, this does not pose a problem. In houses of extremely tight construction, additional mechanical ventilation is recommended.
19. During manufacturing, fabricating and shipping, various components of this appliance are treated with certain oils, films or bonding agents. These chemicals are not harmful but may produce annoying smoke and smells

as they are burned off during the initial operation of the appliance; possibly causing headaches, or eye or lung irritation. This is a normal and temporary occurrence.

The initial break-in operation should last two to three hours with the burner at the highest setting. Provide maximum ventilation by opening windows or doors to allow odors to dissipate. Any odors remaining after this initial break-in period will be slight and will disappear with continued use.

20. Input ratings are shown in BTU per hour and are for elevations up to 2,000 feet. For elevations above 2,000 feet, input ratings should be reduced 4 percent for each 1,000 feet above sea level. Refer to the National Fuel Gas Code.
21. The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa).
22. The appliance must be isolated from the gas supply piping system by closing its equipment shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa).
23. Do not use this room heater if any part has been under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.
24. Never burn solid fuels in a fireplace where a unvented room heater is installed.
25. Always have a fireplace screen in place when the appliance is in operation, and unless other provisions for combustion air are provided, the screen shall have an opening(s) for induction of combustion air.
26. Do not fill spaces around the firebox with insulation or other materials. These spaces must be maintained to prevent the firebox from coming in contact with combustible materials.

This appliance may be installed in an aftermarket, permanently located, manufactured (mobile) home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.

CODES

Adhere to all local codes or, in their absence, the latest edition of THE NATIONAL FUEL GAS CODE ANSI Z223.1 or NFPA54 which can be obtained from…

American National Standards Institute, Inc.
1430 Broadway
New York, NY 10018
or
National Fire Protection Association, Inc.
Batterymarch Park
Quincy, MA 02269

OPERATION

This unvented gas heater requires no outside venting and burns cleanly with high heating efficiency.

This zero-clearance unvented gas heater can be installed against any wall that is accessible to a gas line.

GAS PRESSURES

Control	Fuel	Millivolt
Regulator Pressure	Natural Gas	3.5" w.c.
Pilot Regulator	Natural Gas	3.5" w.c.
Max. Inlet Pressure	Natural Gas	10.5" w.c.
Min. Inlet Pressure	Natural Gas	5.0" w.c.
Regulator Pressure	LP	10.0" w.c.
Max. Inlet Pressure	LP	13.0" w.c.
Min. Inlet Pressure	LP	11.0" w.c.

GAS SPECIFICATIONS

			Input BTU/hr.	
Model	**Fuel**	**Control**	**Max.**	**Min.**
CFX24NV	Nat.	Millivolt	22,000	17,000
CFX24PV	LP	Millivolt	22,000	17,000
CFX32NV	Nat.	Millivolt	26,000	20,000
CFX32PV	LP	Millivolt	26,000	20,000

NOTE: For LP models an external regulator is required to reduce supply pressure to a maximum of 13" w.c.

IGNITION CONTROLS

The Piezo igniter allows ignition of the pilot without the use of matches or batteries.

The millivolt control has four (4) positions:

OFF - All gas to the gas logs is shut off at the valve.

IGN - Valve position to light/maintain a standing pilot.

ON - Valve position to turn ON/OFF log set with remote switch/thermostat.

LOW/HI - Variable position to control flame height (heat output). Both front and rear burners are in operation to provide realistic glow and yellow flame.

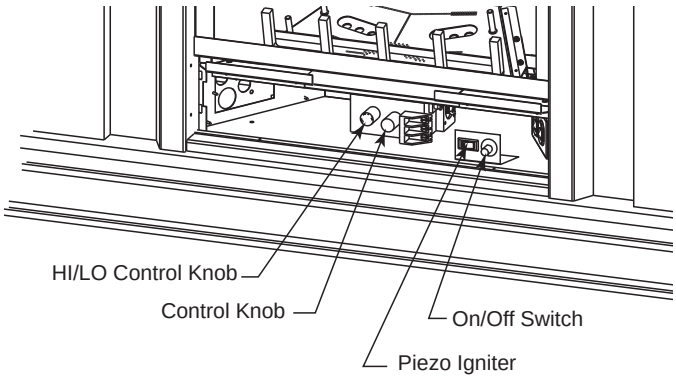


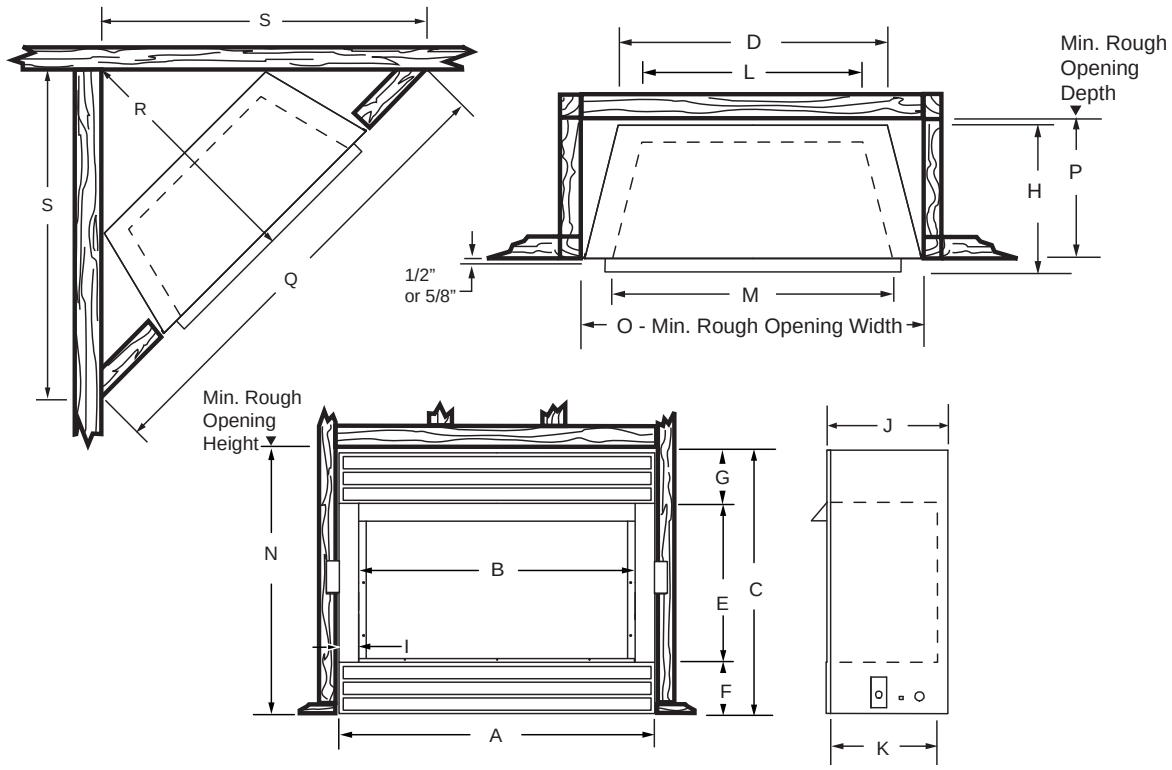
Figure 1 -
Control Access Door Shown Open

PILOT

The gas log heater is fitted with a specially designed safety pilot light which senses the amount of oxygen available in the room and shuts the gas log heater off if the oxygen level begins to drop below a satisfactory level. The pilot can only be re-lit when adequate fresh air is available.

THERMAL GENERATOR

The millivolt gas log pilot is fitted with a millivolt generator to provide power for remote activation.



Ref.	CFX24(N/P)VWM		CFX32(N/P)VWM	
A	24½"	(622 mm)	32"	(813 mm)
B	22½"	(572 mm)	28¾"	(730 mm)
C	26½"	(673 mm)	30"	(762 mm)
D	14"	(356 mm)	21¾"	(553 mm)
E	17"	(432 mm)	20¼"	(514 mm)
F	4⅝"	(118 mm)	4¾"	(121 mm)
G	4⅞"	(124 mm)	5"	(127 mm)
H	11⅞"	(302 mm)	13⅜"	(340 mm)
I	1"	(25 mm)	1⅝"	(41 mm)
J	10½"	(267 mm)	12"	(305 mm)
K	9"	(229 mm)	10⅝"	(270 mm)
L	13⅛"	(333 mm)	17½"	(445 mm)
M	21"	(533 mm)	27"	(686 mm)
Framing Dimensions				
N	26¾"	(680 mm)	30¼"	(768 mm)
O	24¾"	(629 mm)	32½"	(826 mm)
P	10½"	(267 mm)	12¼"	(311 mm)
Q	42½"	(1080 mm)	53¾"	(1326 mm)
R	21"	(533 mm)	26¾"	(680 mm)
S	30"	(762 mm)	38"	(965 mm)

Figure 2 -
Fireplace and Framing Dimensions for CFXWM models

Ref.	CFX24(N/P)(U/DW)		CFX32(N/P)(U/DW)	
T	11¾"	(299 mm)	15¼"	(387 mm)
U	19¾"	(502 mm)	26"	(660 mm)
V	26⅞"	(683 mm)	33"	(838 mm)
W*	52½"	(1334 mm)	61⁹⁄₁₆"	(1564 mm)
X*	44'	(1118 mm)	50¾"	(1289 mm)
Y	26⅝"	(676 mm)	30⅝"	(778 mm)
Z*	4½"	(114 mm)	4"	(102 mm)
AA*	15"	(381 mm)	18¼"	(464 mm)
BB*	11½"	(292 mm)	14⅞"	(378 mm)

**Not applicable to CFXWM models.*

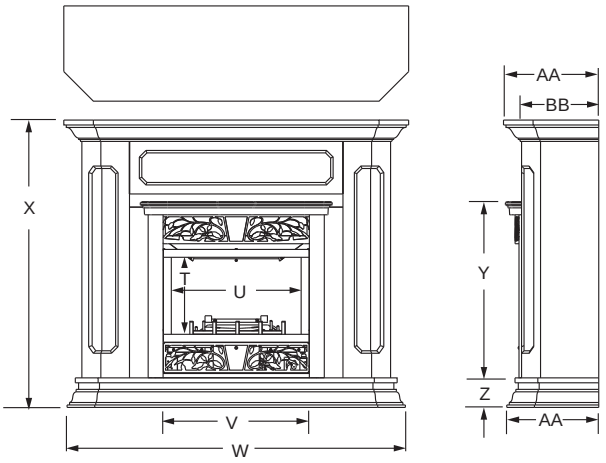


Figure 3 -
Firebox Dimensions for CFXU and CFXDW models

UNPACKING

Make sure you have received all parts:
Check your packing list to verify that all listed parts have been received. You should have the following:

- Unvented gas heater
- Two (2) 90° angle brackets*
- Facing
- Installation/operating instructions
- Two (2) anchoring screws
- Cabinet*
- Ceramic fiber logs
- Four (4) black screws *

**Not included with CFXWM models*

Millivolt controlled heater designed to be operated with optional devices for ON/OFF functions.

- Hand held Remote with receiver
- Wall T-stat with 20' wire
- Wall switch with 20' wire
- Hand held Thermostat Remote

CAUTION Gloves are recommended when handling ceramic fiber logs to prevent skin irritation from loose fibers. Logs are fragile — handle with care.

Carefully inspect the contents for shipping damage. If any parts are missing or damaged, immediately inform the dealer from whom you purchased the appliance. **Do not attempt to install any part of the appliance unless you have all parts in good condition.**

What you will need for installation:

You must have the following items available before proceeding with installation:

- External regulator (for propane/LPG only)
- Piping which complies with local codes
- Phillips head screwdriver
- Pipe sealant approved for use with propane/LPG (Resistant to sulfur compounds)
- Pipe wrench

WARNING
Do not install the heater:

- **Where curtains, furniture, clothing, or other flammable objects are less than 42" from the front of the heater.**
- **In high traffic areas.**
- **In windy or drafty areas.**

INSTALLATION INFORMATION

In planning the installation for the fireplace it is necessary to determine where the unit is to be installed and whether optional accessories are desired. Gas supply piping should also be planned. The following steps represent the normal sequence of installation. Each installation is unique, however, and might require a different sequence.

1. Determine desired location for fireplace. Refer to the *Location of Fireplace* and *Clearances* and *Height Requirements* sections in this manual.

   NOTE: Be sure all packing material has been removed from underside the unit.
2. Assemble mantel (if applicable) and install fireplace according to the instructions in this manual.
2. Install logs per instructions found in this manual.
3. Field wire main power supply to units with fan kit. Refer to the *Electrical Section* found in this manual. (Electrical connections should only be performed by an experienced, licensed certified tradesman).
4. Install optional ON/OFF kit on units with millivolt control. Refer to the installation instructions included with the kit and also refer to the *Electrical Wiring* section found in this manual.
5. Plumb gas line according to the *Connecting the Gas* section found in this manual. (Gas connections should only be performed by an experienced, licensed/certified tradesman).

WARNING: If the area in which the heater may be operated does not meet the required volume for indoor combustion air, combustion and ventilation air shall be provided by one of the methods described in the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*, the *International Fuel Gas Code* or applicable local codes.

DETERMINING FIREPLACE LOCATION

Carefully select the best location for installation of your unvented fireplace. The following factors should be taken into consideration.

- Clearance to side wall, ceiling, woodwork and window or other combustibles. Refer to *Clearances* and *Height Requirements* section. Minimum clearances to combustibles **must be maintained.**
- Location must not be affected by drafts caused by kitchen exhaust fans, ceiling fans, return air registers for forced air furnaces/air conditioners, windows or doors.
- Installation must provide adequate ventilation and combustion air.
- **DO NOT INSTALL THE CFX MODEL IN A BEDROOM OR BATHROOM.**
- Location should be out of high traffic areas and away from furniture and draperies due to heat from firebox.

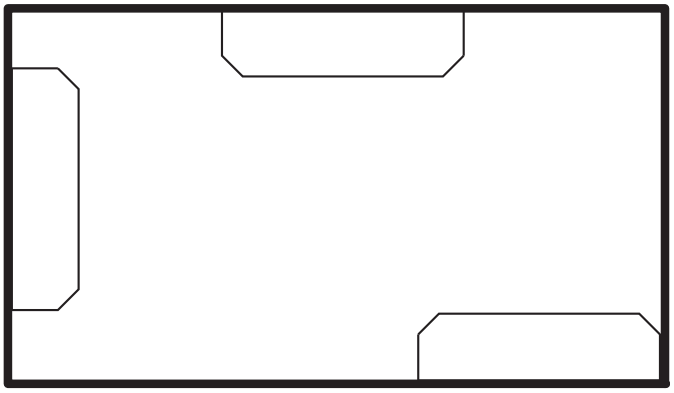


Figure 4a -
Suggested Locations for CFXU or CFXDW models

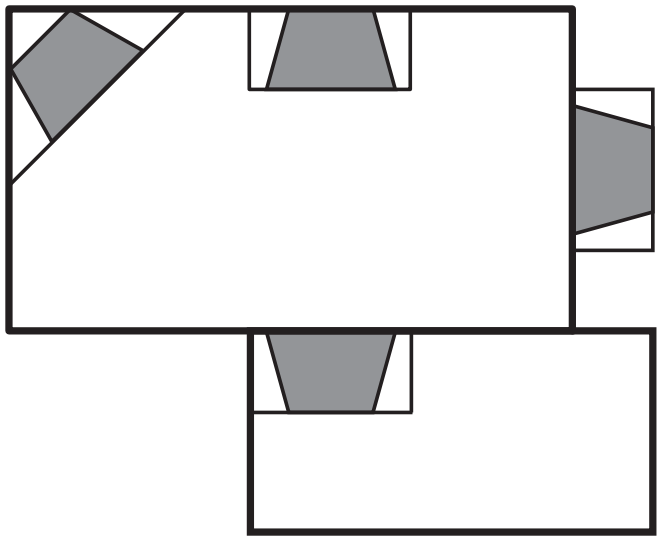


Figure 4b-
Suggested Locations for CFXWM models

- Never obstruct the front opening of the unvented fireplace or restrict the flow of combustion and ventilation air.
- Do not install in the vicinity where gasoline or other flammable liquids may be stored. The unvented firebox must be kept clear and free from the combustible materials.

CLEARANCES AND HEIGHT REQUIREMENTS

Ensure that minimum clearances shown in *Figure 5* are maintained. Left and right clearances are determined when facing the front of the firebox.

Follow these instructions carefully to ensure safe installation. Failure to follow these requirements may create a fire hazard.

1. **Sidewall Clearances** — The clearance from the inside of the appliance to any combustible adjacent wall should not be less than 9". *Figure 5*
2. **Ceiling Clearance** — The ceiling must be at least 42" from the top of the firebox opening. *Figure 5*
3. **Back Wall Clearance** — The appliance may be placed against a combustible back wall.

WARNING: The dimensions shown in *Figure 4* are minimum clearances to maintain in installing this heater. Left and right clearances are determined when facing the front of the heater.
Follow these instructions carefully to ensure safe installation. Failure to follow instructions exactly can create a fire hazard.

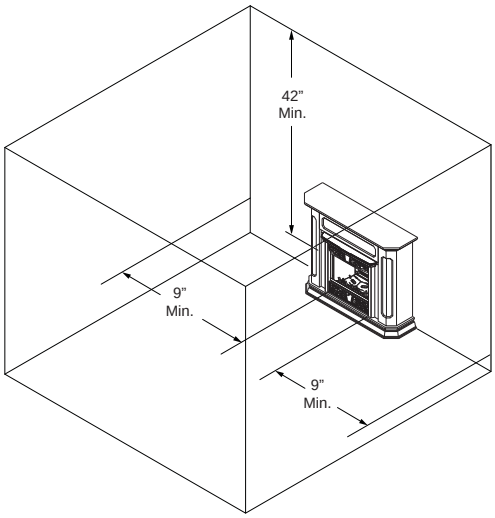


Figure 5 -
Clearances and Height Requirements

Floor Clearance — The fireplace may be installed directly on a combustible floor or a raised platform of an appropriate height. Do not place fireplace on carpeting, vinyl, tile or other soft floor coverings. It may, however, be placed on flat wood, plywood, particle board or other hard surfaces. Be sure fireplace rests on a solid continuous floor or platform with appropriate framing for support and so that no cold air can enter from under the firebox.

Mantel clearances — The CFX face must be installed. If a combustible mantel is installed. It must meet the clearance requirements detailed in *Figure 6.*

NOTE: The Vermont Castings Group Barrington Mantel model series is specifically designed to comply with all mantel temperature requirements. (The CFX32NVDW uses the BWC400-DW. The CFX24NVDW uses the BWC300-DW.) Any custom-built mantel must comply with all clearance requirements shown in this instruction manual.

If unit is to be built in, the fireplace framing can be built before or after the appliance is set in place. **BE SURE THAT ALL PACKING MATERIAL HAS BEEN REMOVED FROM THE UNDERSIDE OF THE UNIT PRIOR TO SETTING THE FIREBOX IN PLACE.** Construct fireplace framing following *Figure 2 on Page 6* for fireplace dimensions. The framing headers may rest directly on top of the firebox.

The fireplace may be installed directly on a combustible floor or a raised platform of an appropriate height. Do not place fireplace on carpeting, vinyl, tile or other soft floor coverings. It may, however, be placed on flat wood, plywood, particle board or other hard surfaces. Be sure fireplace rests on a solid continuous floor or platform with appropriate framing for support and so that no cold air can enter from under the firebox.

Anchor fireplace to the side framing members using nailing flanges.

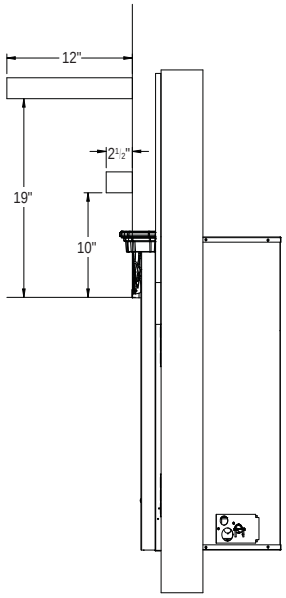


Figure 6 -
Mantel Clearances

WARNING: The fireplace must be installed in accordance with the clearance and height requirements identified in this manual.

FIREPLACE INSTALLATION IN WALL

Note: The information below applies only to the CFXWM models.

1. Remove 5 total screws (3 top, 2 bottom) to remove front face.
2. Select proper nailing flanges located on each side of the firebox and bend them out.
3. Slide the firebox into prepared framing or position firebox in its final position and frame later.
4. Level the firebox by checking the top edge of the firebox. Shim if necessary.
5. Anchor firebox to the side framing members using 8d nails or other suitable fasteners. *Figure 7*
6. Re-install CFX face.

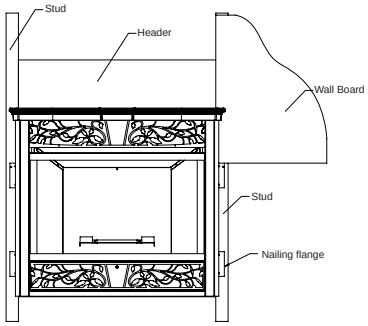


Figure 7-
Nailing Flanges

When finishing a custom cabinet, mantel or other built-in enclosure, the opening size to accommodate the fireplace with trim installed is as follows:

Ref.	CFX24	CFX32
J	26¾" (680mm)	31¼" (800mm)
K	25" (635mm)	32$^{13}/_{16}$" (833mm)

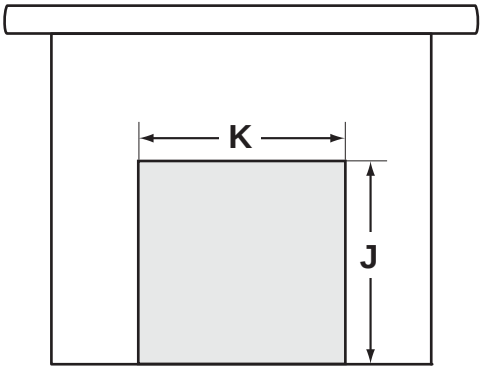


Figure 8 -
Custom Cabinet

WARNING: Do not operate the unit without the screen frame panel installed.

MANTEL INSTALLATION

Note: the information below applies only to the CFXU and CFXDW models.

1. Place base near final position. Make sure you have access to all four (4) sides.
2. Place sides in the approximate location on base. Align back edge of side with back of base. Secure joining block #1 to bottom of side using two (2) 1¼" screws. Be sure joining block is flush with bottom of side piece. (Do not attach to base at this time)
3. With the aid of an assistant, and using two (2) joining block #4 and (12) 1¼" screws, secure header to the sides. Carefully match the moulding.
4. Adjust cabinet assembly so it is centered from side to side and the back of the sides are aligned with the back of the base.
5. Temporarily place top on side/header assembly. Adjust sides parallel to the base and top side. Secure the sides to the base using two (2) 1¼" screws in each of the joining blocks.
6. Once the mantel is assembled, temporarily place the fireplace into the mantel in order to locate the trim pieces.

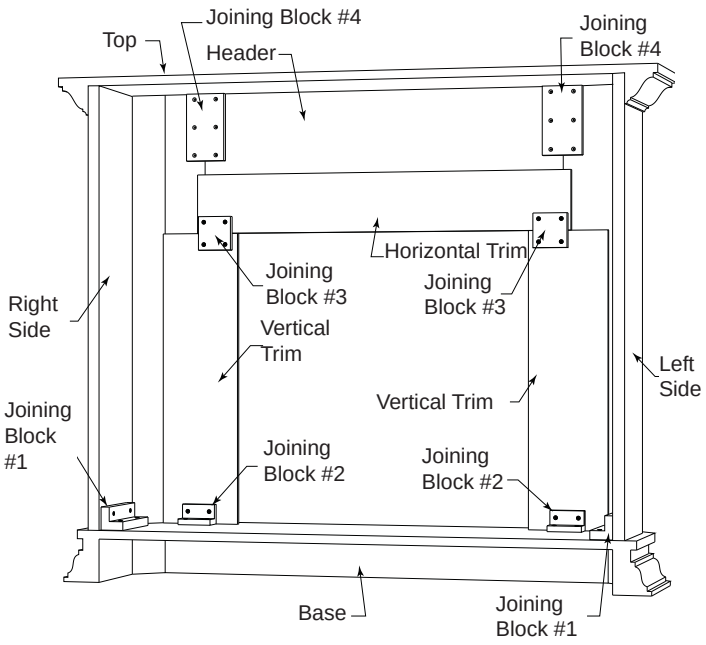


Figure 9 - Barrington Mantel

7. Center the fireplace in the opening with the inside of the fireplace trim or facing even with the inside of the front of the mantel.
8. Attach the horizontal trim piece to the mantel header. Make sure the horizontal trim is centered and there is an approximate 1/4" gap between the bottom of the horizontal trim and the top of the fireplace. Secure with two (2) screws; one on each end of the trim piece in the pre-drilled holes.
9. Place the vertical trim pieces so the edge is about 1/4" from the fireplace body. Make sure the joint between the trim pieces is satisfactory. Secure through joining block #3 into horizontal trim using two (2) screws. Attach joining block #2 to the bottom of the vertical trim. Repeat for other side.
10. Remove fireplace and move mantel to its final position. Cut wall base moulding as necessary to provide adequate fit against wall.
11. Locate (anti-tip) bracket on wall so the cleat on the underside of the mantel top is captured in the wall bracket and the wall bracket is screwed into a stud.

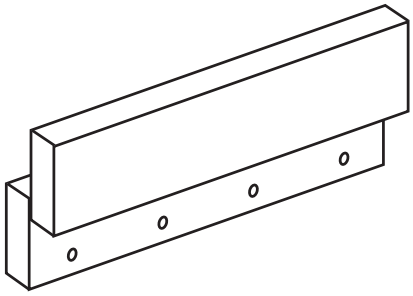


Figure 10 - Wall Bracket

FIREBOX TO MANTEL INSTALLATION

Note: the information below applies only to the CFXU and CFXDW models.

1. Slide fireplace into mantel.
2. Use the two (2) 'L' brackets provided to secure the fireplace to the mantel. *Figure 11*
3. When the fireplace is in the proper position, centered in mantel opening, remove the control panel door and secure fireplace through holes provided in base to the floor of the mantel using screws provided. *Figure 12*

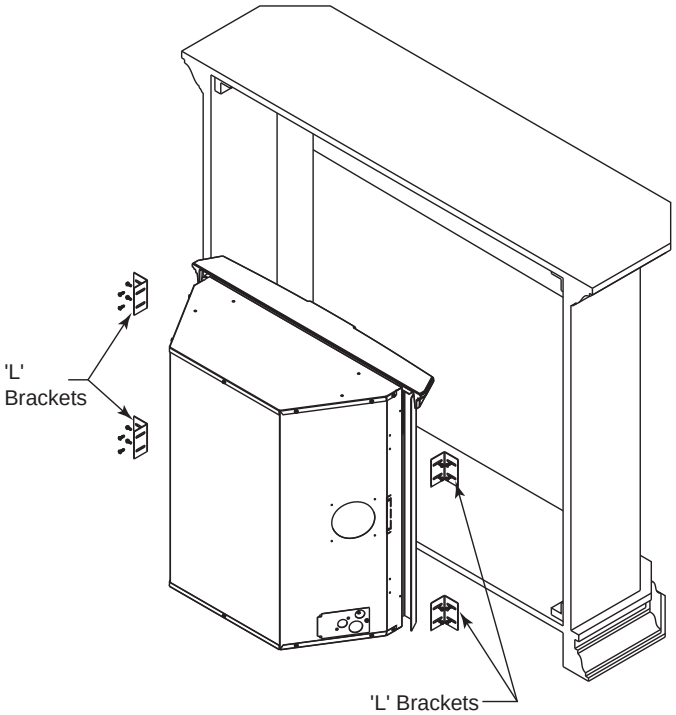


Figure 11 -
Secure Fireplace to Mantel with 'L' Brackets

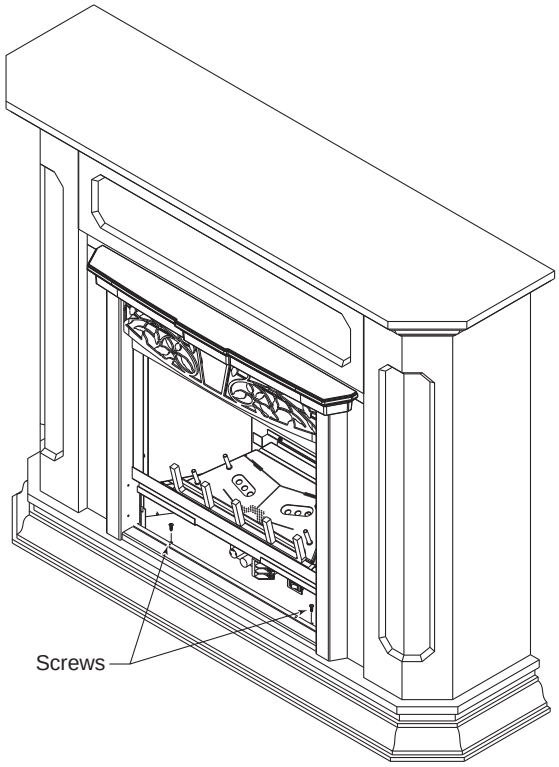


Figure 12 -
Secure Fireplace to Mantel through Base

REMOVING SCREEN

Figure 13

The screen on the front of the CFX is easily removable for placement of logs or brick and for cleaning.
To remove the screen follow the instructions below:

1. Remove bottom access door.
2. Remove fireplace screen frame panel by pushing screen frame panel up and out.

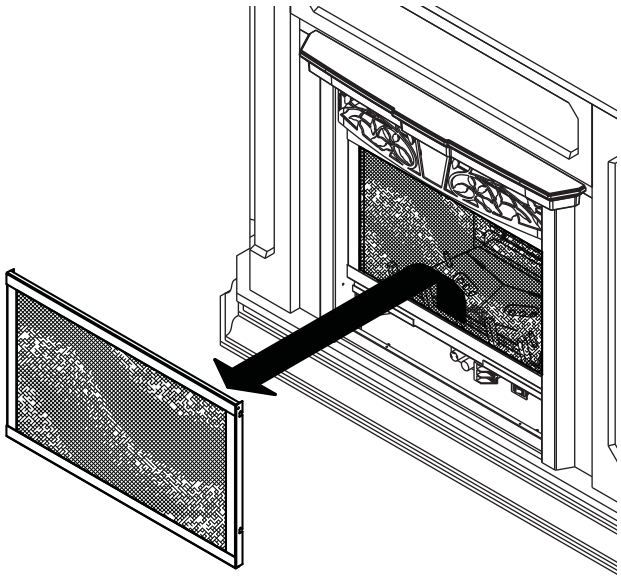


Figure 13 -
Removing Fireplace Screen Frame Panel

OPTIONAL FIREBRICK PANELS

1. Remove optional firebrick panels from packaging. Check to see that you have the following:
   - Firebrick panels, 3
   - Retainer brackets, 2
   - Black screws, 2

   If any part or parts are missing, contact dealer where you bought fireplace.
2. Turn off fireplace and allow to cool.
3. Remove fireplace screen *(Refer to page 11, figure 13)* and logs.
4. Place rear firebrick panel on back wall of firebox. Set bottom of panel behind the bracket tabs of the grate. *Figure 14*
5. Place one of the side firebrick panels in cabinet. Line up the hole in the retainer clip with the hole inside the firebox. Using Phillips screwdriver, attach the retainer bracket to inside of firebox. *Figure 15*
6. Repeat step five for the other firebrick side panel.

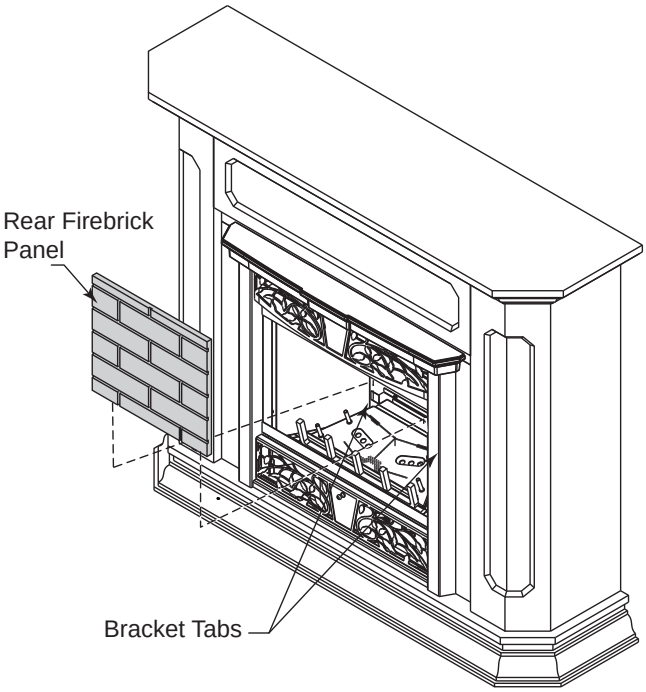


Figure 14 -
Install Rear Firebrick Panel

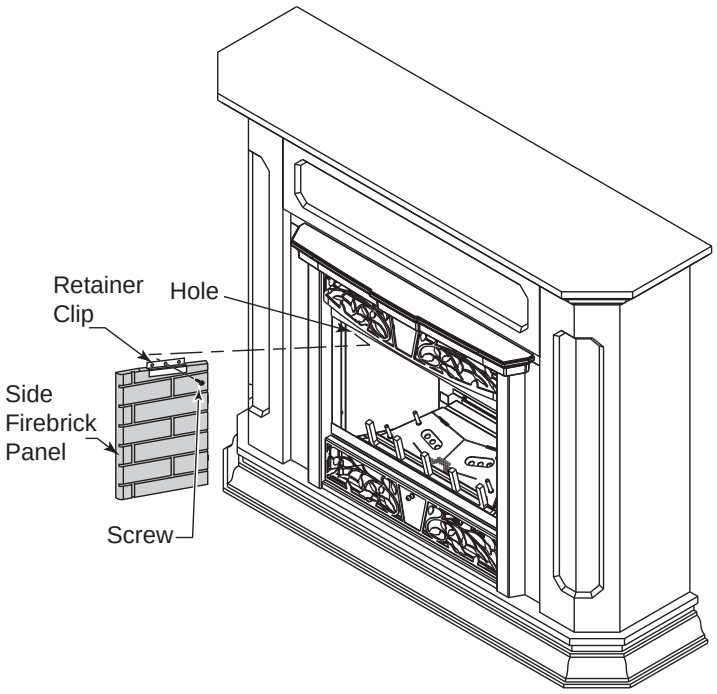


Figure 15 -
Install Side Firebrick Panel

CHECK GAS TYPE

Use proper gas type for the fireplace you are installing. If you have conflicting gas type, do not install fireplace. See dealer where you purchased the fireplace for proper fireplace for your gas type or conversion kit.

WARNING: A qualified installer or service person must connect appliance to gas supply. Follow all local codes.

INSTALLING GAS PIPE TO FIREPLACE / BURNER SYSTEM LOCATION

GAS PIPE INSTALLATION ITEMS NEEDED

Before installing gas pipe, make sure you have the items listed below.

- External regulator
- Piping (check local codes)
- Sealant (resistant to propane/LP gas) (supplied by installer)
- Equipment shutoff valve*
- Test gauge connection*
- Sediment trap (recommended)
- Tee joint
- Pipe wrench
- Approved flexible gas line with gas connector (if allowed by local codes — not provided)

* A CSA design-certified equipment shutoff valve with 1/8" NPT tap is an acceptable alternative to test gauge connection. Purchase the CSA design-certified equipment shutoff valve from your dealer.

For propane/LP connections only, the installer must supply an external regulator. The external regulator will reduce incoming gas pressure. You must reduce incoming gas pressure to between 11 and 13 inches of water. If you do not reduce incoming gas pressure, burner system regulator damage could occur. Install external regulator with the vent pointing down as shown in *Figure 16.* Pointing the vent down protects it from freezing rain or sleet.

When using copper of flex connectors use only fittings approved for gas connections. The gas control inlet is 3/8" NPT.

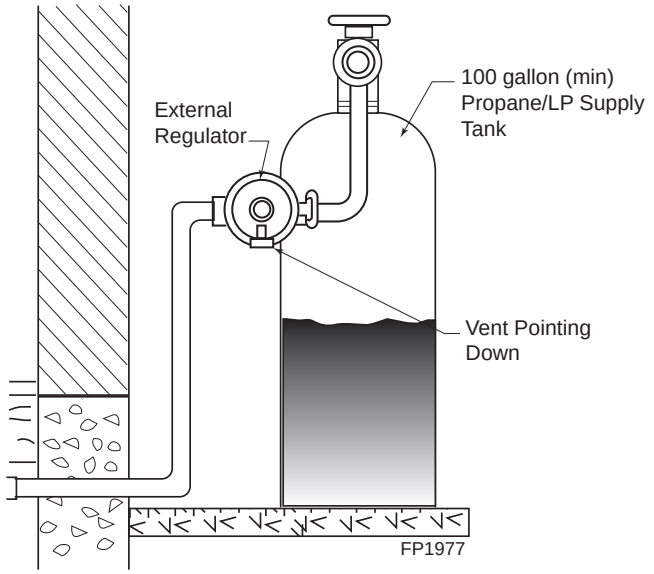


Figure 16 -
External Regulator with Vent Pointing Down (Propane/LP Only)

CAUTION

For propane/LP units, never connect fireplace directly to the propane/LP supply. This burner system requires an external regulator (not supplied). Install the external regulator between the burner system and propane/LP supply.

CAUTION

Use only new black iron or steel pipe. Internally tinned copper or copper tubing can be used per National Fuel Code, Section 2.6.3, providing gas meets hydrogen sulfide limits, and where permitted by local codes. Gas piping system must be sized to provide minimum inlet pressure (listed on data plate) at the maximum flow rate (BTU/hr). Undue pressure loss will occur if the pipe is too small.

WARNING: Only persons licensed to work with gas piping may make the necessary gas connections to this appliance.

CONNECT THE GAS

NOTE: The gas line connection may be made using 1/2" rigid tubing or an approved flex connector. Since some municipalities have additional local codes it is always best to consult your local authorities and the current edition of the National Fuel Gas Code ANSI.Z223.1, NFPA54. In Canada CSA-B149 (1 or 2) Installation Code.

A listed manual shutoff valve must be installed upstream of the appliance. Union tee and plugged 1/8" NPT pressure tapping point should be installed upstream of the appliance. *Figure 17*

IMPORTANT: *Install main gas valve (equipment shutoff valve) in an accessible location. The main gas valve is for turning on or shutting off the gas to the fireplace.*

Check your building codes for any special requirements for locating equipment shutoff valve to fireplaces.

CAUTION

A manual shutoff valve must be installed upstream of the appliance. Union tee and plugged 1/8” NPT pressure tapping point should be installed upstream of the appliance. *Figure 17*

Apply pipe joint sealant lightly to male threads. This will prevent excess sealant from going into pipe. Excess sealant in pipe could result in clogged burner system valves. We recommend that you install a sediment trap/drip leg in supply line as shown in *Figure 17*. Locate sediment trap/drip leg where it is within reach for cleaning. Install in piping system between fuel supply and burner system. Locate sediment trap/drip leg where trapped matter is not likely to freeze. A sediment trap collects moisture and contaminants and keeps them from going into the burner system gas controls. If sediment trap/drip leg is not installed or is installed wrong, burner system may not run properly.

CAUTION

Use pipe joint sealant that is resistant to liquid petroleum (LP) gas.

Natural Gas
From Gas Meter
(4.5" w.c. to 10.5" w.c. Pressure)
Propane/LP
From External Regulator
(11" w.c. to 13" w.c. Pressure)

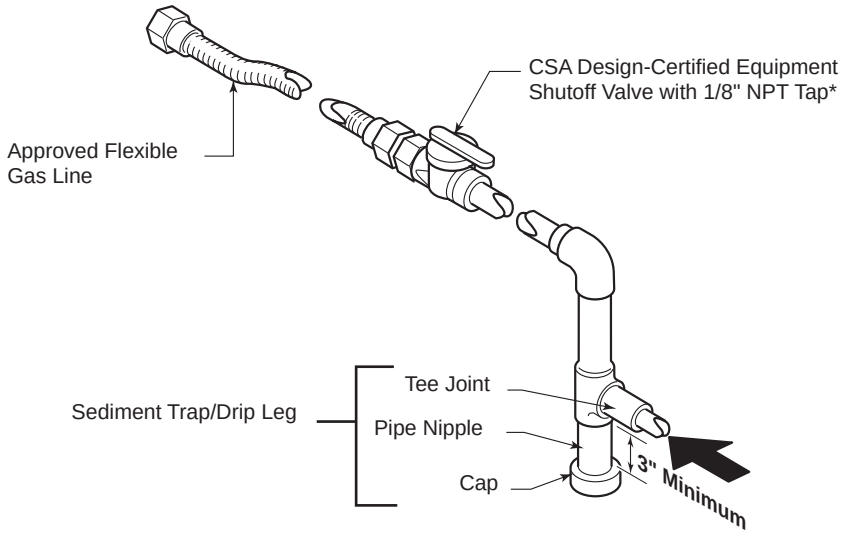


Figure 17 -
Gas Connection

CHECK GAS PRESSURE

1. Check gas type. The gas supply must be the same as stated on the appliance's rating decal. If the gas supply is different from the fireplace, **STOP!** Do not install the appliance. Contact your dealer immediately.
2. To ease installation, a 24" (610 mm) flex line with manual shut-off valve has been provided with on this appliance. Install and attach 1/2" gas line onto shut-off valve.
3. After completing gas line connection, purge air from gas line and test all gas joints from the gas meter to the fireplace for leaks. Use a solution of 50/50 water and soap solution or a gas sniffer.
4. To adjust flame height, turn HI/LO knob to HI to get maximum pressure to burner. Turn HI/LO knob to LO to get minimum pressure.
5. To check gas pressures at valve, turn captured screw counter clockwise 2 or 3 turns and then place tubing to pressure gauge over test point. Turn unit to high. *Figure 18* After taking pressure reading, be sure and turn captured screw clockwise firmly to reseal. Do not over torque. Check test points for gas leaks.

WARNING: Do not use open flame to check for gas leaks.

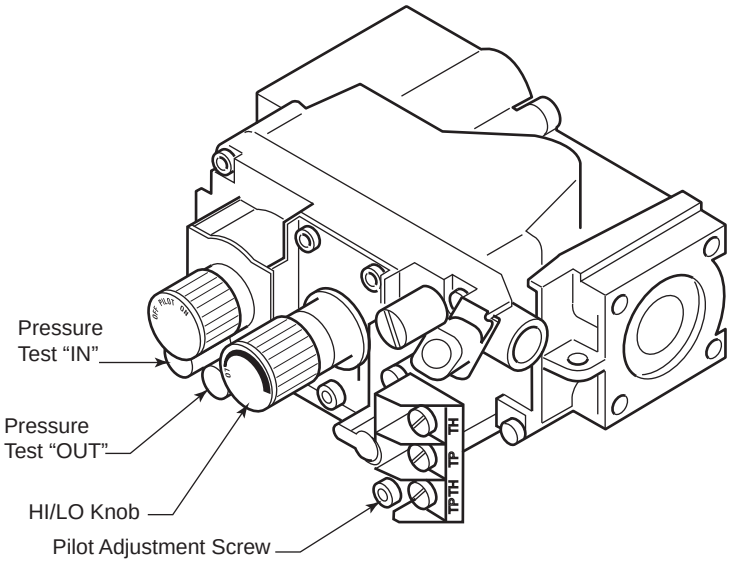


Figure 18 -
Gas Pressure Check at Gas Valve

ELECTRICAL WIRING

The millivolt valve is a self-powered combination gas control that **DOES NOT REQUIRE 110V AC TO OPERATE.**

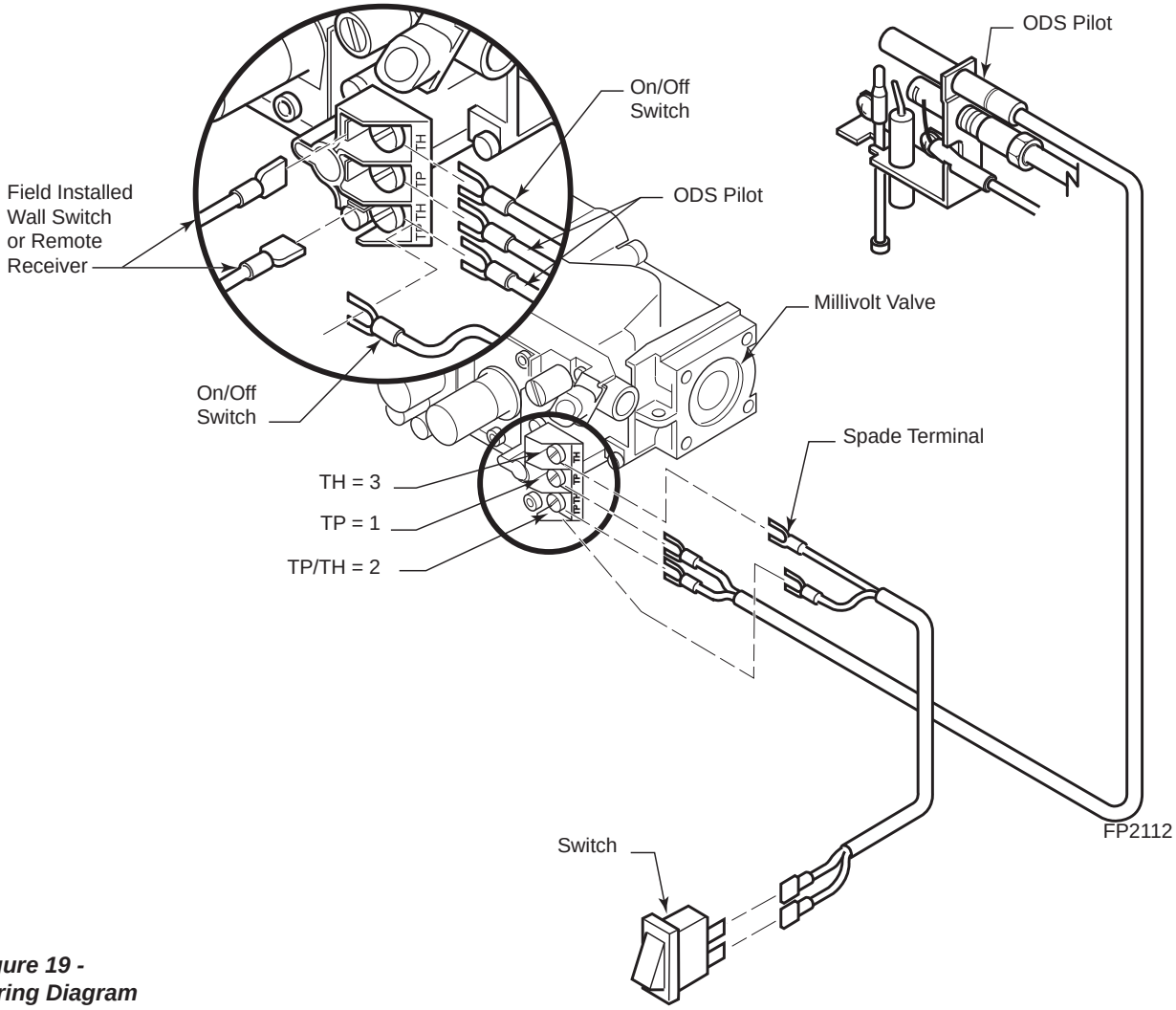


Figure 19 - Wiring Diagram

CAUTION

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

CONNECTING OPTIONAL WALL SWITCH OR THERMOSTAT

1. Use 18 AWG, two-wire cable, 20 feet maximum length.
2. At one end of the cable, connect both wires to the wall switch or thermostat. At the other end, connect one wire to TP/TH and one wire to TH. The color of the wires does not matter.

CONNECTING REMOTE RECEIVER

NOTE: These instructions supersede the section entitled "Hearth Mount" in the millivolt hand-held remote instructions supplied with the remote control.

1. Remove bottom louver door.
2. Connect the remote connectors located in the unit.
3. Apply Velcro® pads with self-adhesive backing to bottom of remote receiver and to floor of compartment behind access panel.
4. Attach remote receiver to firebox with Velcro® pads. Control switch must face forward.

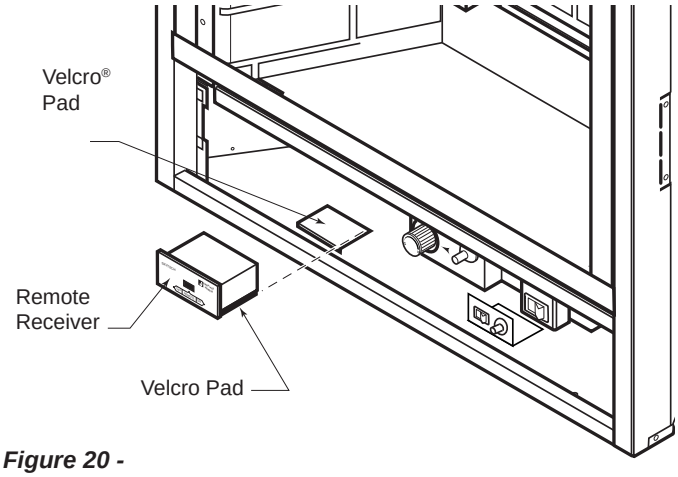


Figure 20 -
Install Remote Receiver

NOTICE

Do not place remote in combustion chamber.

CHECK SYSTEM OPERATION

The millivolt system and individual components may be checked with a millivolt meter having a 0-1000 mV range. Conduct each check shown in chart below by connection meter test leads to terminals as indicated.

A. COMPLETE MILLIVOLT SYSTEM CHECK

("A" Reading - Thermostat contacts CLOSED - Control Knob "ON" - Main burner should be come ON)

a. If the reading is more than 100 millivolts and the automatic valve still does not come on, replace the control.

b. If the closed circuit reading ("A" reading) is less than 100 millivolts, determine cause for low reading, proceed to Section B below.

B. Thermopile Output Reading Check

("B" Reading - Thermostat contacts OPEN - Main burner OFF)

1. Check gas pressure to the unit. If gas pressure is within minimum and maximum on data plate, then check pilot voltage, 325 millivolts minimum. If the minimum millivolt reading is not obtainable, replace pilot.

Check Test	To Test	Connect to Meter Leads to Terminals	Switch or Thermostat Contacts	Meter Reading Should Be
A	Complete System	2 & 3	Closed	Closed
B	Thermopile Output	1 & 2	Open	Open

Before you begin — This unit is supplied with a set of three ceramic fiber logs. Do not handle these logs with your bare hands. Always wear gloves to prevent skin irritation from ceramic fibers. After handling logs, wash your hands gently with soap and water to remove any traces of fibers.

WARNING: The positioning of the logs is critical to the safe and clean operation of this heater. Sooting and other problems may result if the logs are not properly and firmly positioned in the appliance. Never add additional logs or embellishments such as pine cones, vermiculite or rock wool to the heater.

PROPER INSTALLATION SEQUENCE (CFX24)

Figure 21

1. Install the **rear log (#3**) on back of burner.
2. Install the **right log (#1)** on burner pins on right side of burner.
3. Install the **left log (#2)** on burner pins on left side of burner.

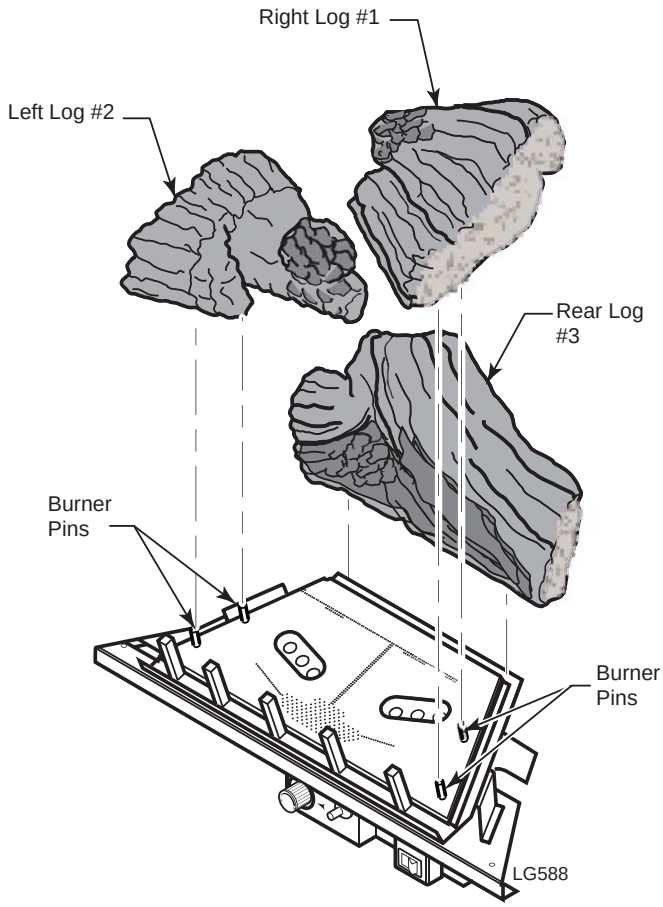


Figure 21 - Log Placement CFX24

WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this heater may result in property damage or personal injury.

PROPER INSTALLATION SEQUENCE (CFX32)

Figure 22

1. Install **front right log (#1)** on two pins on right side of burner.
2. Install **left front log (#2)** on two pins on left side of burner.
3. Install **back log (#3)** on back of burner.
4. Install **right middle log (#4)** on two pins on burner. Rest right end of right middle log on the right front log.
5. Install **left middle log (#5)** on two pins on burner. Rest left end of left middle log on left front log.

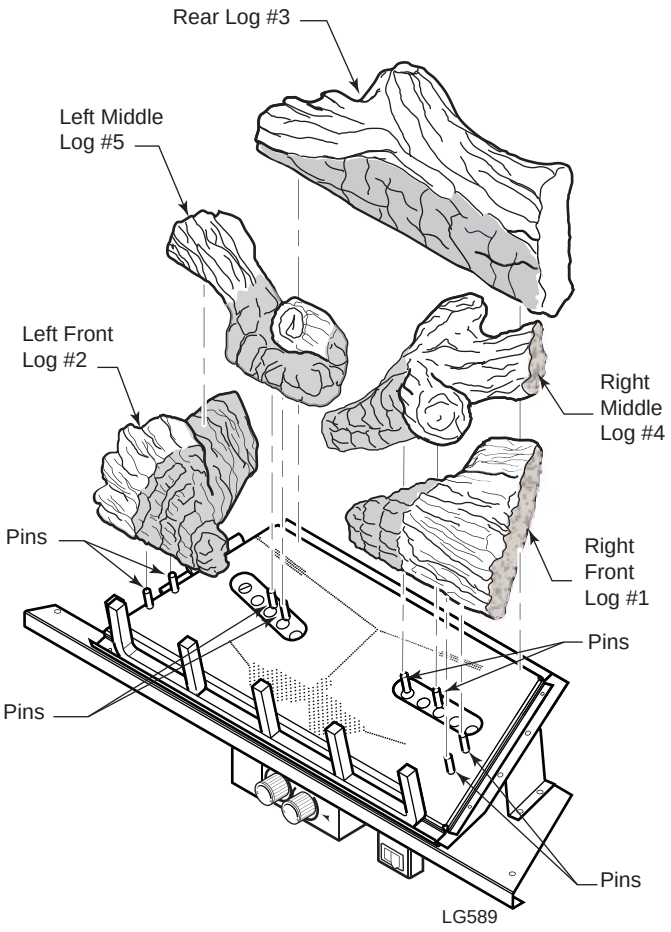


Figure 22 - Log Placement CFX32

CAUTION

DO NOT sprinkle volcanic rock on the logs or around the pilot or the main burner. This may cause sooting. Only place volcanic rock on the floor of the fireplace.

During initial operation of the new heater, burning logs will give off a paper burning smell and orange flames will be present. Simply open the windows for a few hours to vent the odor.

PLACE ROCK WOOL

After installing logs, pull apart dime-size pieces of rock wool. Place rock wool evenly over burner ports. Wash hands after installing rock wool. Itching may occur.

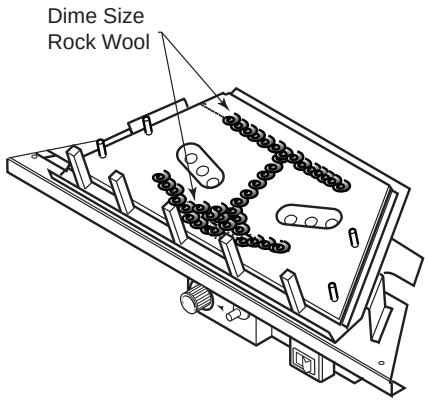


Figure 23 -
Rock wool Installation

CAUTION

- **Use only rock wool provided with log set.**
- **Do not add additional rock wool.**
- **Place rock wool on burner ports only.**
- **Keep air gap between rear log and burner CLEAN.**

Flames from the pilot, front and rear burner should be visually checked as soon as the heater is installed. In addition, periodically check the flames visually during operation.

CHECK THE PILOT FLAME

The pilot flame must always be present when the heater is in operation. It should just touch the top of the thermocouple tip for natural. *Refer to Figure 24* for correct pilot flame.

If the pilot flame does not touch the thermocouple, then the main burner cannot function reliably. *Refer to Figure 25* for incorrect shape of pilot flame.

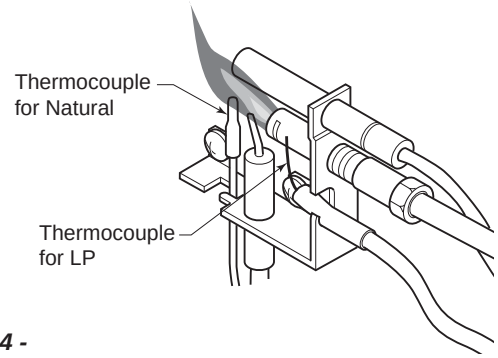


Figure 24 -
Correct Appearance of Pilot Flame

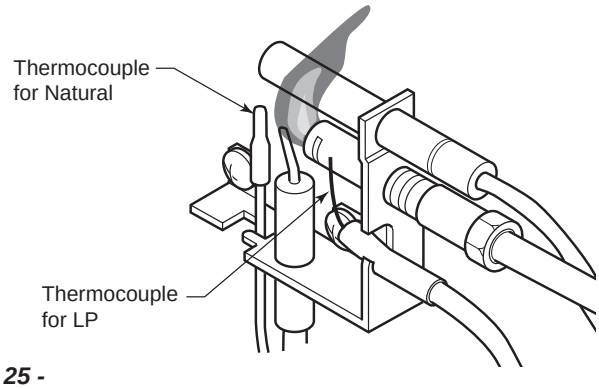


Figure 25 -
Incorrect Appearance of Pilot Flame

CORRECT LOG FLAME APPEARANCE

In normal operation at full rate after 15 minutes, the following flame appearances should be observed:

Burner will have a random pattern of yellow flames. *Refer to Figure 26.* There should be glowing embers in front of burner.

NOTE: The front flames and embers will be an opaque orange color during the burn off time.

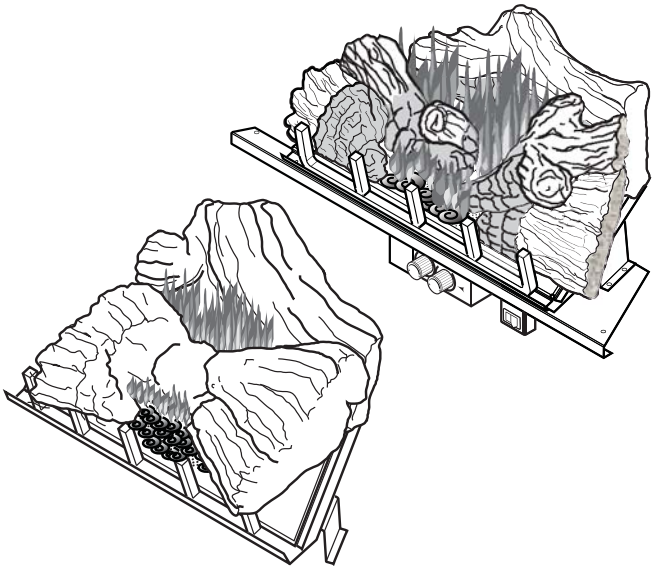


Figure 26 -
Burner Flame Appearance - CFX32 (top) and CFX24 (bottom)

OPTIONAL EQUIPMENT

FORCED AIR KIT

If you are installing the forced air kit (Models BLO24-T or BLOT), see the installation instructions provided with the kit for electrical wiring requirements or the blower installation section.

Model CFX24 uses blower model BLO24T.

Model CFX32 uses blower model BLOT.

The firebox must be connected to main power supply at time of firebox installation. The blower must be installed prior to the installation of the unvented heater. The electrical connections must be made before the firebox is framed and enclosed in the finished walls.

FIREBRICK

Optional firebrick kits can be installed. Refer to installation instructions provided with kit or *Page 12.*

CAUTION

Electrical connections should only be performed by a qualified, licensed electrician. The main power must be off when connecting to main electrical power supply or performing service.

OPERATING INSTRUCTIONS

Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into the fireplace. Do not place a blower inside the burn area of the firebox. Ceiling fans may create drafts that alter flame patterns. Sooting and improper burning will result.

During manufacturing, fabricating and shipping, various components of this appliance are treated with certain oils, films or bonding agents. These chemicals are not harmful, but may produce annoying smoke and smells as they are burned off during the initial operation of the appliance, possibly causing headaches or eye or lung irritation. *This is a normal and temporary occurrence.*

The initial break-in operation should last two to three hours with the burner at the highest setting. Provide maximum ventilation by opening windows or doors to allow odors to dissipate. Any odors remaining after this initial break-in will be slight and will disappear with continued use.

FOR YOUR SAFETY READ BEFORE LIGHTING

WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

A. This appliance is equipped with a piezo ignition device which automatically lights the pilot. If piezo is not working properly refer to *Match Lighting Instructions, Page 23.*

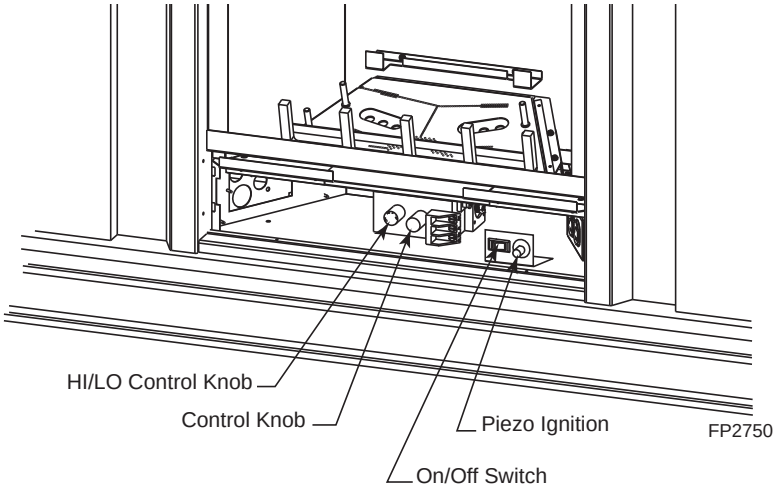
B. BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS:

- Do not attempt to light any appliance.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

C. Use only your hand to push in, or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it. Call a qualified service technician. Force or attempted repair may result in a fire or explosion.

D. Do not use this appliance if any part of it has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been under water.

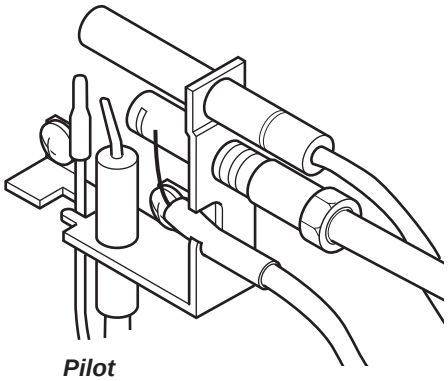


CFX Controls

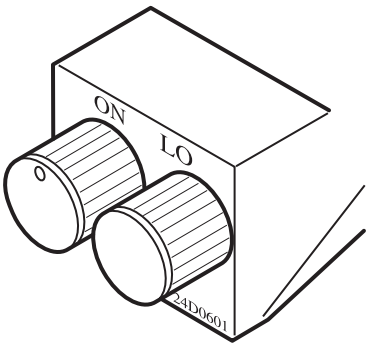
MILLIVOLT CONTROL LIGHTING INSTRUCTIONS

1. **STOP!** Read the safety information label.
2. Make sure the manual shutoff valve is fully open.
3. This gas log set is equipped with an ignition device (piezo) which automatically lights the pilot. If piezo igniter does not light the pilot, Refer to the instructions for *Match Lighting Instructions, Page 25.*
4. Turn gas control knob clockwise ↷ to the OFF position, set the thermostat to the lowest setting and turn ON/OFF switch to OFF position.
5. Wait (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information label. If you don't smell gas, go to next step.
6. From OFF position, turn the gas control knob counterclockwise ↶ to IGN position. Push in control knob for 5 seconds.
7. With the control knob pushed in, push in and release the piezo igniter button to light the pilot.
8. Continue pushing the control knob in for a further 60 seconds to prevent the flame detector from shutting off the gas while the probe is warming up. Release the control knob.
9. Turn gas control knob counterclockwise ↶ to the ON position.
10. After the pilot has been lit for one minute, the burners can be turned on. Turn the ON/OFF switch to ON position or adjust thermostat to desired setting.
11. If the gas logs will not operate, follow the instructions *To Turn Off Gas To Appliance* below and call your service technician or gas supplier.

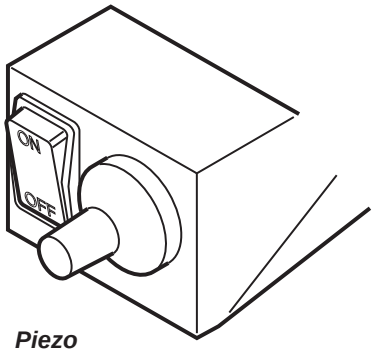
WARNING: Wait 30 seconds before readjusting the heater when the control knob has been turned down to a lower setting.



Pilot



Control Knobs



Piezo

TO TURN OFF GAS TO HEATER

1. Turn control knob clockwise ↷ to **OFF** position to completely shut off the heater.
2. If applicable: Turn ON/OFF switch to OFF position and/or set thermostat (if present) to lowest setting.
3. If applicable: Turn off all electric power to the heater.

MATCH LIGHTING INSTRUCTIONS

1. Remove any items necessary for easy access to the pilot (for example: logs, screens, etc.).
2. Follow appropriate lighting instructions found previously. Instead of pushing and releasing the piezo button, light a match and hold the flame to the end of the pilot and ignite the pilot.
3. After control knob has been released and pilot stays lit, reinstall any items that were removed for pilot access.
4. Call a qualified service technician for repair or replacement of the piezo igniter.

WARNING: Turn off heater and allow to cool before cleaning. Disconnect electrical power before cleaning or servicing.

CLEANING AND SERVICING

Annual inspection and cleaning by your dealer or qualified service technician is recommended to prevent malfunction and/or sooting.

Remove fireplace screen. Carefully lower screen from mounting lugs and set aside during cleaning. See instruction manual for installation of screen. **DO NOT OPERATE THE UNIT WITH THE SCREEN REMOVED.**

Remove logs, handling carefully by holding gently at each end. Gloves are recommended to prevent skin irritation from ceramic fibers. If skin becomes irritated, wash gently with soap and water. See manual for correct log placement.

PERIODIC CLEANING - See parts diagram for location of items discussed below.

- Do not use cleaning fluid to clean logs or any part of heater.
- Brush logs with soft bristle brush or vacuum with brush attachment.
- Vacuum loose particles and dust from the front and rear burner, control and piezo covers and grate weldment.
- Inspect and clean burner. Remove lint or particles with vacuum, brush or pipe cleaners.
- External case should be dusted and wiped with a wet soapy cloth.

ANNUAL CLEANING/INSPECTION - Refer to the parts diagram for location of items discussed below.

- Inspect and clean all burner ports.
- Inspect ODS pilot for operation and accumulation of lint at air intake holes.
- Verify flame pattern and log placement for proper operation.
- Verify smooth and responsive ignition of burner.

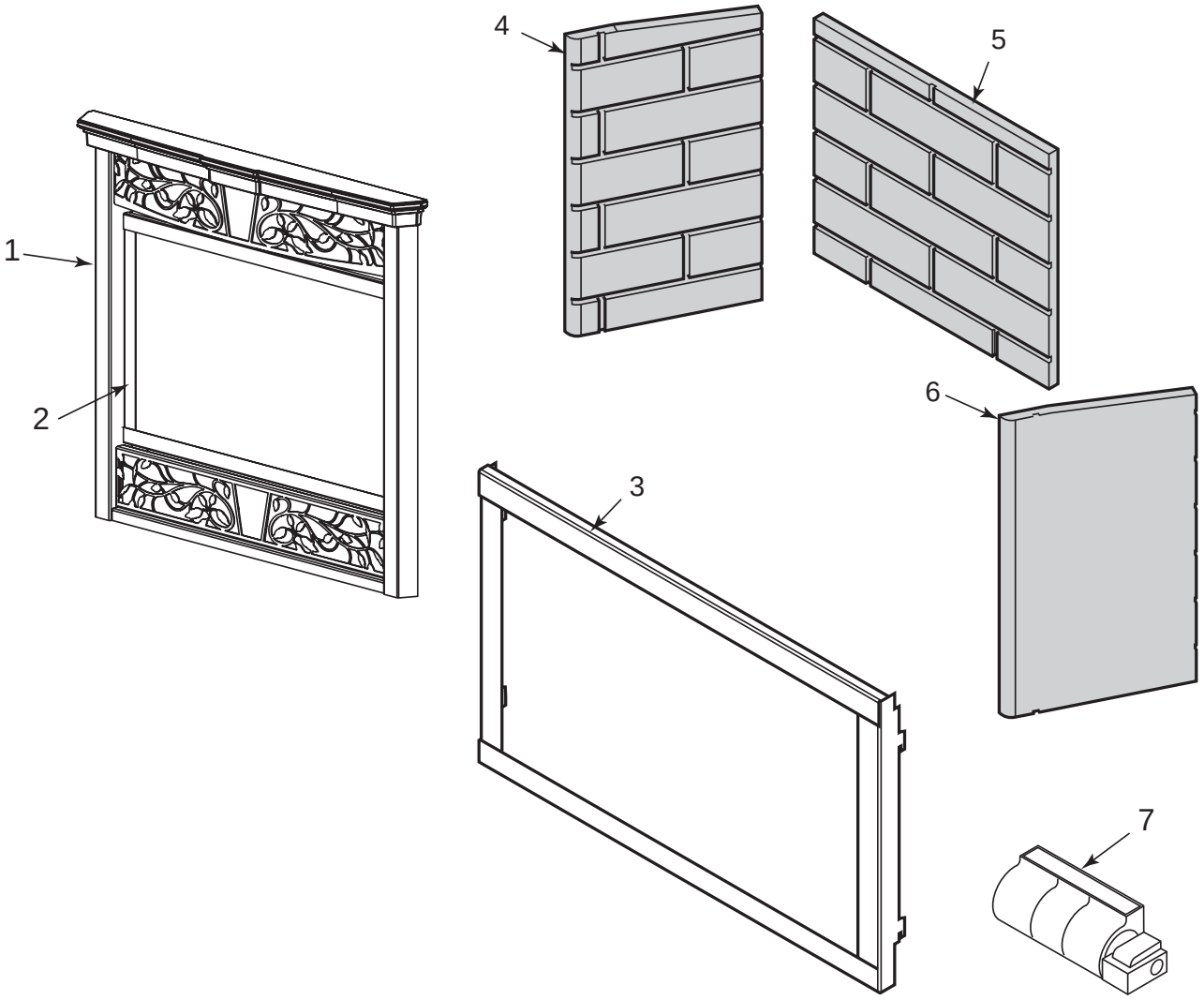
WARNING: Turn appliance OFF and allow to cool before servicing. Only a qualified service person should service and repair the heater.

Note: All troubleshooting items are listed in order of operation.

PROBLEM	POSSIBLE CAUSE	REMEDY
When igniter button is pressed, there is no spark at ODS/pilot.	1. Igniter electrode positioned wrong.	1 Replace igniter.
	2. Igniter electrode is broken.	2. Replace igniter.
	3. Igniter electrode not connected to igniter cable.	3. Reconnect igniter cable.
	4. Igniter cable pinched or wet. Keep igniter cable dry.	4. Free igniter cable if pinched by any metal or tubing.
	5. Broken igniter cable.	5. Replace igniter cable.
	6. Bad piezo igniter.	6. Replace piezo igniter.
Appliance produces unwanted odors.	1. Appliance burning vapors from paint, hair spray, glues, etc.	1. Ventilate room. Stop using odor causing products while heater is running.
	2. Gas leak.	2. Locate and correct all leaks.
	3. Initial burn off	3. Ventilate room and turn unit on high until odor is gone. Odor should be gone after 2 to 3 hours of continuous use.
Appliance shuts off during use.	1. Not enough fresh air is available for ODS/ pilot to operate.	1. Open window and/or door for ventilation.
	2. Low line pressure.	2. Contact local gas company.
	3. ODS/pilot is partially clogged.	3. Clean ODS/pilot.
	4. Defective Thermopile.	4. Check wire connections. Check output should be 500 millivolts across TH/ TP and TP Terminals with ON/OFF switches off.
	5. Restrictions in incoming air flow.	5. Check for bottom riser on glass door, sunken fireplace, excessive lava rock/ cinders densely packed against grate.
Gas odor even when control knob is in OFF position.	1. Gas leak.	1. Locate and correct all leaks.
	2. Control valve defective.	2. Replace control valve.
When igniter button is pressed, there is spark at ODS pilot, but no ignition.	1. Gas supply turned off or manual shutoff valve closed.	1. Turn on gas supply or open manual shutoff valve.
	2. Control knob not in PILOT position.	2. Turn control knob to PILOT position.
	3. Control knob not pressed in while in PILOT position.	3. Press in control knob while in PILOT position.
	4. Air in gas lines when installed.	4. Continue holding down control knob. Repeat igniting operation until air is removed.
	5. ODS/pilot is clogged.	5. Replace ODS/pilot assembly or get it serviced.
	6. Gas regulator setting is not correct.	6. Check incoming pressure. Replace gas regulator.

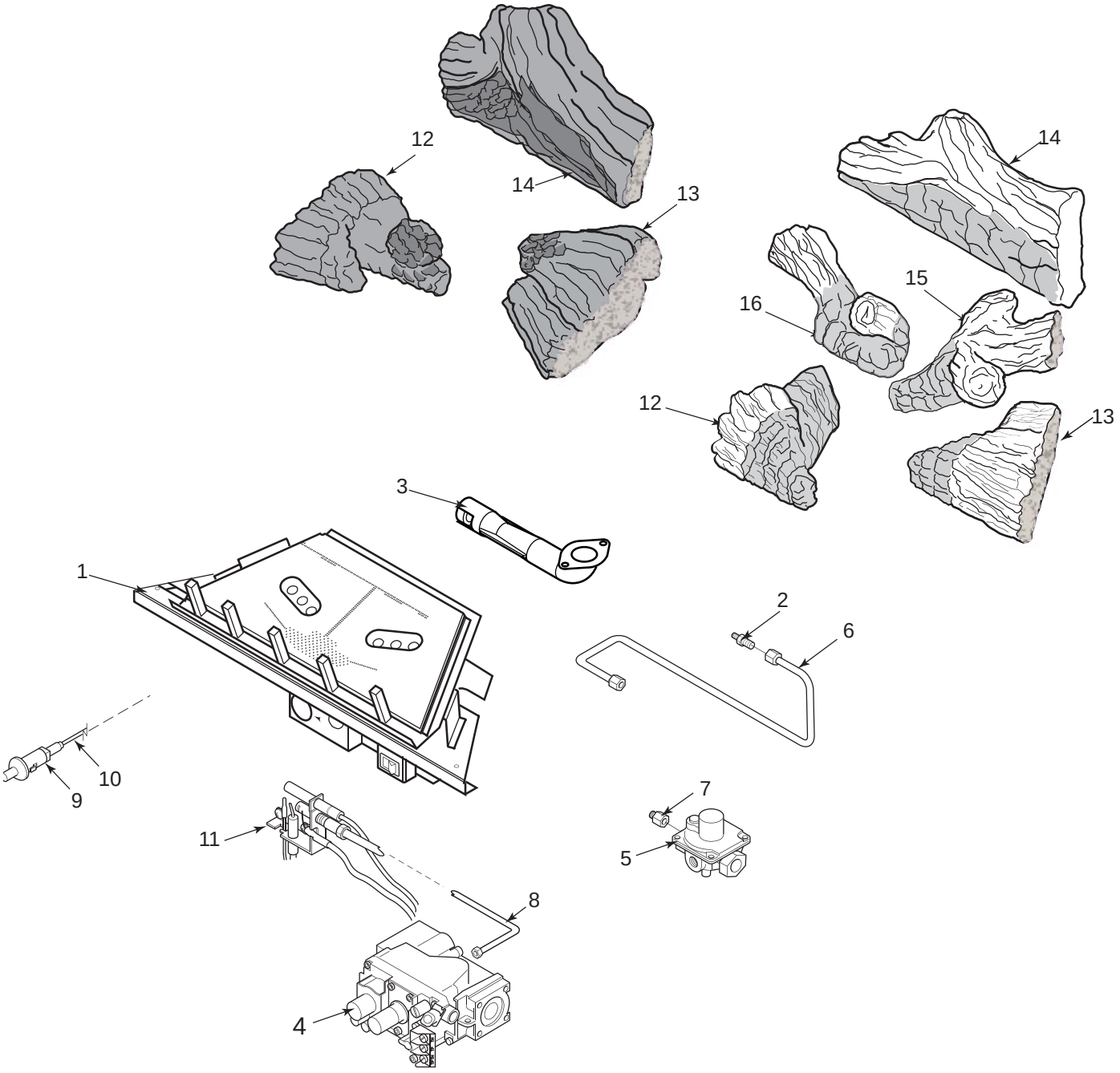
WARNING: If the gas quality is bad, your pilot may not stay lit, the burners may produce soot and the heater may backfire when lit. If the gas quality or pressure is low, contact your local gas supplier immediately.

PROBLEM	POSSIBLE CAUSE	REMEDY
ODS/pilot lights, but flame goes out when control knob is released.	1. Control knob not fully pressed in.	1. Press in control knob fully.
	2. Control knob not pressed in long enough.	2. After ODS/pilot lights, keep control knob pressed in for 30 seconds.
	3. Manual shutoff valve not fully open.	3. Fully open manual shutoff valve.
	4. Thermocouple connection loose at control valve.	4. Hand tighten thermocouple connection until snug, then tighten 1/4 turn more.
	5. Pilot flame not touching thermocouple, which allows thermocouple to cool, causing pilot flame to go out. This problem could be caused by either low gas pressure, or a dirty or partially clogged ODS/pilot.	5. Contact local gas company.
	6. Thermocouple damaged.	6. Replace thermocouple.
	7. Control valve damaged.	7. Replace control valve.
Burner does not light after ODS/pilot is lit.	1. Burner orifice is clogged.	1. Burner orifice is clogged.
	2. Burner orifice diameter is too small.	2. Burner orifice diameter is too small.
	3. Inlet gas pressure is too low.	3. Inlet gas pressure is too low.
Burner backfires during combustion	1. Manifold pressure is too low.	1. Contact local gas company.
	2. Burner orifice is clogged.	2. Clean burner or replace burner orifice.
Slight smoke or odor during initial operation.	1. Burner orifice is clogged or damaged.	1. Clean burner or replace burner orifice.
	2. Burner is damaged.	2. Replace burner.
	3. Gas regulator defective.	3. Replace gas regulator.
Logs appear to smoke after initial operation.	1. Vapors from paint or curing process of logs.	1. Problem will stop after a few hours of operation. Run the heater with the damper open if you have one, or open a window for the first few hours. 2. Log heater is intended to be smokeless. Turn OFF heater and call qualified service person.
Heater produces a whistling noise when burner is lit.	1. Turning control knob to HIGH position when burner is cold.	1. Turn control knob to LOW position and let warm up for a minute.
	2. Air in gas line.	2. Operate burner until air is removed from line. Have gas line checked by local gas company.
	3. Dirty or partially clogged burner orifices.	3. Clean burner or replace burner orifice.
No gas to pilot.	1. LP-regulator shut down due to inlet pressure too high.	1. Verify LP tank regulator is installed and set at 11" to 13" w.c. 2. Replace regulator on heater.



Item	Description	Qty.	CFX24	CFX32
1.	Assembly Door, Painted	1	88D0032K	88D0107K
2.	Assembly Screen Frame, Painted	1	88D0034K	88D0109K
3.	Screen Assembly	1	33D4501	33D5501
4.	Left Firebrick (Optional)	1	26D7061	26D7065
5.	Center Firebrick (Optional)	1	26D7060	26D7064
6.	Right Firebrick (Optional)	1	26D7062	26D7066
7.	Blower (Optional)	1	BL024T	BLOT

WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this appliance may result in property damage or personal injury.



WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this appliance may result in property damage or personal injury.

			CFX24		CFX32	
Item	**Description**	**Qty.**	**Natural**	**Propane**	**Natural**	**Propane**
1.	Burner/Grate Assembly	1	33D4043	33D4043	33D5050	33D5050
2.	Injector	1	59D0062	33D4046	33D5040	33D5039
3.	Venturi	1	58D0454	33D4058	58D0454	58D0454
4.	Millivolt Valve	1	14D0467	14D0468	14D0467	14D0468
5.	Pilot Regulator	1	14D0469	--	14D0469	--
6.	Burner to Valve Tube	1	33D4511	33D4511	33D5511	33D5511
7.	Tube Fitting, 3/8 x 5/16	1	11V0313	11V0313	11V0313	11V0313
8.	ODS Pilot Valve Tube, 3/16	1	33D5540	49D0050	33D5540	49D0050
9.	Piezo Igniter	1	14D0503	14D0503	14D0503	14D0503
10.	Piezo Wire	1	00K0632	00K0632	00K0632	00K0632
11.	ODS Pilot Assembly	1	14D0473	14D0477	14D0473	14D0477
	Log Set					
12.	#1 Left Log	1	33D4040	33D4040	33D5042	33D5042
13.	#2 Right Log	1	33D4041	33D4041	33D5043	33D5043
14.	#3 Rear Log	1	33D4039	33D4039	33D5044	33D5044
15.	#4 Right Middle Log	1	---	--	33D5045	33D5045
16.	#5 Left Middle Log	1	--	--	33D5046	33D5046
	Parts Available, Not Shown					
	Tube Nut, 5/16	1	00K0917	00K0917	00K0917	00K0917
	Tube Ferrule, 5/16	1	00K0918	00K0918	00K0918	00K0918
	Flex Tube w/Fittings	1	20H0022	20H0022	20H0022	20H0022
	Rock Wool Bag	1	58D0443	58D0443	70D0129	70D0129

LIMITED LIFETIME WARRANTY POLICY

LIFETIME WARRANTY

The following components are warranted for life to the original owner, subject to proof of purchase: Firebox, Combustion Chamber, Heat Exchanger, Grate and Stainless Steel Burners.

FIVE YEAR WARRANTY

The following components are warranted five (5) years to the original owner, subject of proof of purchase: Ceramic Fiber Logs, Catalytic Filter and Aluminzed Burners.

BASIC WARRANTY

Vermont Castings Group warrants the components and materials in your gas appliance to be free from manufacturing and material defects for a period of one year from date of installation. After installation, if any of the components manufactured by Vermont Castings Group in the appliance are found to be defective in materials or workmanship, Vermont Castings Group will, at its option, replace or repair the defective components at no charge to the original owner. Vermont Castings Group will also pay for reasonable labor costs incurred in replacing or repairing such components for a period of two years from date of installation. Any products presented for warranty repair must be accompanied by a dated proof of purchase.

This Limited Lifetime Warranty will be void if the appliance in not installed by a qualified installer in accordance with the installation instructions. The Limited Lifetime Warranty will also be void if the appliance is not operated and maintained according to the operating instructions supplied with the appliance, and does not extend to (1) firebox/burner assembly damage by accident, neglect, misuse, abuse, alterations, negligence of others, including the installation thereof by unqualified installers, (2) the costs of removal, re-installation or transportation of defective parts on the appliance, or (3) incidental or consequential damage. All service work must be performed by an authorized service representative.

This warranty is expressly in lieu of other warranties, express or implied, including the warranty of merchantability of fitness for purpose and of all other obligations or liabilities. Vermont Castings Group does not assume for it any other obligations or liabilities in connection with sale or use of the appliance. It states that do not allow limitations on how long an implied warranty lasts, or do not allow exclusion of indirect damage, those limitations of exclusions may not apply to you. You may also have additional rights not covered in the Limited Lifetime Warranty.

Vermont Castings Group reserves the right to investigate any and all the claims against the Limited Lifetime Warranty and decide upon method of settlement.

IF WARRANTY SERVICE IS NEEDED

1. Contact your supplier. Make sure you have your warranty, your sales receipt and the model/serial number of your Vermont Castings Group product.
2. DO NOT ATTEMPT TO DO ANY SERVICE WORK YOURSELF.

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